

REMARKS

As a preliminary matter, the drawings stand objected to for including a reference character not described in the Specification. Accordingly, Applicant has amended the Specification for consistency with the drawing changes filed with Amendment D, on May 24, 2005. Reconsideration and withdrawal of this objection are respectfully requested at least in light of these amendments.

Claims 1-2 and 18 stand rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Christner et al. (U.S. 5,162,158). With respect to claim 18, claim 18 has been cancelled without prejudice herein, rendering the rejection thereto now moot. With respect to claims 1-2, Applicant respectfully traverses this rejection because the cited reference does not disclose or suggest metallic islands formed on a substrate and physically spaced from each other so as to expose a metallic compound among the islands, nor does the reference disclose or suggest a metallic crystal layer containing crystal grains that each have a corresponding one of the metallic islands grown so as to stand from a surface of a metallic compound, as in independent claim 1 of the present invention, as amended.

The Examiner asserts that Christner's grains 36, 38, 40, and 42 are analogous to the crystal grains of the present invention. Christner's grains, however, are not analogous. Christner's grains are deposited only on the top surfaces of the grains 43 of the chromium layer 20, and not on the surface of the substrate 16. (See Fig. 3). Accordingly, the composition shown by Christner is significantly different from the present invention.

Claim 1 of the present invention has therefore been amended to clarify that metallic islands are formed on the surface of the substrate, and that these islands are also physically spaced from each other so as to expose a metallic compound among the islands. Claim 1 has been further amended to clarify that crystal grains contained in the metallic layer are each grown from a corresponding one of the metallic islands so as to stand from a surface of the metallic compound. Christner cannot read upon these features of the present invention. As discussed above, Christner fails to teach or suggest that metallic islands are formed on the surface of a substrate and that each crystal grain is grown from a corresponding metallic island so as to stand from a surface of the metallic compound among the islands.

Support for these amendments to claim 1 can be found at least from Figs. 2 and 11 of the present Application, and their respective accompanying descriptions. The Examiner can see from these drawings and their descriptions that the metallic nucleation sites, or islands, 27 are formed on the surface of the amorphous SiO₂ lamination 24. It can be seen that the surface of the lamination 24 is partially exposed among the metallic nucleation sites/islands 27, and that the fine crystal grains 29 grow from a corresponding one of the sites/islands 27 so as to stand from the exposed surface of the lamination. The Examiner should find that these claim amendments based on these respective portions of the Specification cannot read upon the Christner reference. Accordingly, for at least these reasons, the rejections of claim 1, as well as its dependent claim 2, are respectfully traversed.

Claims 1-4 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ranjan et al. (U.S. 5,631,094) in view of Christner. Applicant respectfully traverses the rejection of claims 1-4 for at least the reasons discussed above in traversing the rejection based on the Christner reference alone. Claims 2-4 all depend either directly or indirectly from independent claim 1, and therefore include all of the features of the base claim. Applicant submits that Ranjan also fails to teach or suggest the clarified features of amended independent claim 1 of the present invention. Ranjan only generally describes the application of layers for its magnetic alloy, and does not teach or suggest the spacing of grains within a layer, or the respective formation of islands, metallic compounds, or crystal grains within the layers.

Claims 1-2 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (U.S. 5,846,648) in view of Christner. Applicant respectfully traverses this rejection, as applied to claims 1-2, for at least the reasons discussed above and previously. Chen fails to teach or suggest many of the features of the present invention, as detailed in the arguments in the previous responses, all of which arguments are incorporated by reference herein. The combination of Christner with Chen fails to overcome the deficiencies in the Christner reference discussed above.

Claims 1-6 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Christner in view of Bertero et al. (U.S. 6,150,015). Applicant respectfully traverses this rejection for at least the reasons discussed above and previously. The deficiencies in the Bertero reference have been discussed in detail in the previous

responses as well. The combination of Bertero with Chen and Christner also fails to overcome the deficiencies in the Christner reference alone. Neither Bertero nor Chen teach or suggest the now clarified features of amended claim 1.

Claims 2-6 have been amended only for grammatical consistency with the amendments to independent claim 1. New claim 19 has been added to recite yet another combination of features of the present invention. Support for new claim 19 can be found from at least Figs. 2 and 11 of the present Application, and the respective accompanying descriptions. The fine crystal grains 29 are shown in these drawings to contact each other at grain boundaries 31. Entry, consideration on the merits, and allowance of new claim 19 are respectfully requested. The Examiner should also find that the features recited in new claim 19 should reinforce the novelty of amended claim 1.

For all of the foregoing reasons, Applicant submits that this Application, including claims 1-6 and 19, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if a further interview would expedite prosecution.

Respectfully submitted,

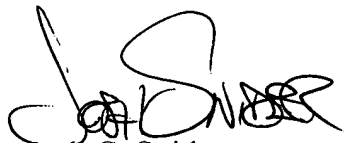
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